



*For immediate release*

## **Bidirectional Buffer from Diodes Incorporated Provides Automatic Connection and Isolation for Serial Busses in Hot-Swap Environment**

**Plano, TX – September 13, 2018** – Diodes Incorporated (Nasdaq: DIOD), a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog and mixed-signal semiconductor markets, today introduced the [PI6ULS5V9511A](#). This I<sup>2</sup>C/SMBus buffer enables hot-swappable line-cards in 'always-on' networks, and is available in an assortment of packages.

Rack-based systems enable web servers, networks, and telecommunication applications using standards such as PCI/cPCI, VME, and AdvancedTCA. These critical systems need to deliver upwards of 99.999% availability, which makes prolonged maintenance and unplanned downtime unacceptable. Hot-swapping, or adding and removing line-cards without removing power, is widely employed to keep these systems running; however, today's sensitive, high-speed serial communication busses were not designed to facilitate hot-swapping.

To address this, the PI6ULS5V9511A provides the protection needed to hot-swap cards that employ serial busses such as I<sup>2</sup>C and SMBus. It provides an effective bidirectional buffer between the card's SDA and SCL signals and the system's live busses. Integrated control circuits detect bus activity, allowing the PI6ULS5V9511A to maintain electrical isolation between the live system and the line-card until it identifies a stop command or the bus is idle, at which point it switches in the signals without causing bus contention or data disruption. This eliminates the potential for bus corruption during card insertion and removal.

Rise-time accelerators are used to meet rise-time requirements on all data pins, while pre-charge technology minimizes the current required to overcome the parasitic capacitance present on the data pins. Because the PI6ULS5V9511A provides drive capabilities it is also an effective buffer for increasing the fan-out of an I<sup>2</sup>C/SMBus port.

The PI6ULS5V9511A features an active-high READY pin which indicates to the system when connection is established, as well as an active-high ENABLE pin that can be used to isolate the two sides of the bidirectional buffer. ESD protection exceeds 4000V HBM, as specified in the JESD22-A114 JEDEC Standard.

The PI6ULS5V9511A is available in three package options to meet the needs of developers with strict space restrictions. This includes the SO-8(W), MSOP-8(U), and the smaller UDFN-8(ZW) packages. Further information is available at [www.diodes.com](http://www.diodes.com).

## **About Diodes Incorporated**

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog and mixed-signal semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, function-specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors, power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes also has timing, connectivity, switching, and signal integrity solutions for high-speed signals. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas and Milpitas, California. Design, marketing, and engineering centers are located in Plano; Milpitas; Taipei, Taiwan; Taoyuan City, Taiwan; Zhubei City, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facility is located in Manchester, with an additional facility located in Shanghai, China. Diodes has assembly and test facilities located in Shanghai, Jinan, Chengdu, and Yangzhou, China, as well as in Hong Kong, Neuhaus and Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; and Munich, Germany, with support offices throughout the world.

Recent news releases, annual reports and SEC filings are available at the Company's website: <http://www.diodes.com>. Written requests may be sent directly to the Company, or they may be e-mailed to: [diodes-fin@diodes.com](mailto:diodes-fin@diodes.com).

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